

USSR

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VISHNEVSKIY, I. N., et al., Ukrainskiy Fizicheskiy Zhurnal, Vol 18, No 10, Oct 73, pp 1599-1604

used for studying the influence of the technological procedure of producing the samples on their properties. After defining the problem in the introduction, the authors give a detailed account of the method used in the investigation, after which they analyze the results. The article contains 8 figures and 6 bibliographic references.

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Optics & Spectroscopy

USSR

AGEYEV, V. A., GAVRILYUK, V. I., KUPRYASHKIN, V. T., LATYSHEV, G. D., LYUTYY, I. N., MAYDANYUK, V. K., MAKOVETSKIY, Yu. V., and FEOKTISTOV, A. I., Institute of Physics of the Academy of Sciences UkrSSR

"Study of Conversion Electron Spectrum of Nb⁹⁶"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No 8, Aug 70, pp 1614-1617

Abstract: Individual segments of the conversion electron spectrum of Nb⁹⁶ associated with the doublet structure of transitions found by Monaro and others are also possible according to the decay scheme of Nb⁹⁶ are studied. The measurements were made on the magnetic β -spectrometer of the type $\pi/2$ of the Institute of Physics of the Academy of Sciences UkrSSR. The measurements showed K-line doublets of transitions in the regions 350, 720, and 810 kev and K241.3 is apparently a single line. The results of the measurements are given in a table. The energy of all transitions observed was determined with an error of ± 0.3 kev. The K-lines of the transitions 350.1 and 352.1 kev were weak and therefore only an estimate of their intensity is given. For all transitions observed, α_K were determined with respect $1/2$

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AGEYEV, V. A., et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, No 8, Aug 70, pp 1614-1617

to the ratios of the intensities of the conversion lines to the intensities of γ -rays. The values of α_K for the transitions 350.1 and 352.1 were estimated. All transitions correspond to multipolarities M1 or E2. The exception was $\gamma_{812.4}$, for which the internal conversion ratio was less than that established from Tc^{96} decay. The ground states are evaluated on the basis of the shell model.

2/2

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EFFECT OF INDIFFERENT ELECTROLYTES ON THE ELECTRODE PROCESS -U-
AUTHOR--(03)--LOPUSHANSKAYA, A.I., PANFILOV, A.V., MAKOVEY, G.L.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKHIMIYA 1970, 6(2), 193-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTRODE PROCESS, ELECTROLYTE, MANGANESE CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/1153 STEP NO--UR/0364/70/006/002/0193/0195
CIRC ACCESSION NO--AP0121712
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121712

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF INERT COMPONENTS IN THE SYSTEM ON THE ELECTRODE PROCESSES IS CONSIDERED. THE VALUE OF THE STEADY STAGE CURRENT DECREASES IN THE SERIES OF THE RATIOS OF THE CHARGES OF THE SUPPORTING ELECTROLYTE IONS: 3:1 GREATER THAN 3:2 GREATER THAN 2:1 GREATER THAN 1:1 GREATER THAN 2:2 GREATER THAN 1:2. THE CONCN. OF THE SUPPORTING ELECTROLYTE ALSO AFFECTS THE CURRENT, TENDING TO DECREASE IT AS THE CONCN. IS INCREASED, EXCEPT FOR MNCL SUB2 FOR WHICH THE CURRENT INCREASES WITH INCREASING CONCN. FACILITY: CHERNOVITS. GOS. UNIV., CHERNOVITSY, USSR.

UNCLASSIFIED

USSR

UDC 621.374

SAMOYLOV, VLADIMIR FEDOROVICH; MAKOVEYEV, VLADIMIR GRIGOR'YEVICH

"Pulse Engineering"

Impul'snaya tekhnika (cf English above), Moscow, Izd. "Svyaz'," 1971, 3rd edition, revised and supplemented. 224 pp, ill. 71 k.

Abstract: In the book the parameters and spectra are considered of a pulse signal, the formation of pulses with linear and nonlinear circuits, the basic theory of pulse amplifiers, pulse modulation and selection of pulses, pulse generators, frequency dividers, and frequency multipliers. In contrast to previous editions, the mathematical apparatus is simplified, to a large degree the material of the book is "transistorized," and a number of new problems are considered: operation of ultrasonic delay lines in color television receivers, inertial interference-free synchronization of television horizontal-scanning generators by the method of automatic frequency and phase control, the circuits in new types of electronic devices, and others. The book is intended as a textbook for communication technicians.

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USSR

SAMOYLOV, VLADIMIR FEDOROVICH; MAKOVEYEV, VLADIMIR GRIGOR'YEVICH, Impul'snaya tekhnika, Izd. "Svyaz'," 1971, 3rd edition, revised and supplemented. 224 pp, ill. 71 k.

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USSR

SAMOYLOV, VLADIMIR FEDOROVICH; MAKOVEYEV, VLADIMIR GRIGOR'YEVICH, Impul'snaya tekhnika, Moscow, Izd. "Svyaz'," 1971, 3rd edition, revised and supplemented. 224 pp, 111. 71 k.

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SAMOYLOV, VLADIMIR FEDOROVICH: MAKOVEYEV, VLADIMIR GRIGOR'YEVICH, Impul'snaya tekhnika, Izd. "Svyaz'," 1971, 3rd edition, revised and supplemented. 224 pp, ill. 71 k.

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USSR

UDC: 621.397.61

KATAYEV, S. I., MAKOVEYEV, V. G., ZUBAREV, Yu. B.

"On Some Technical Facilities for Enrichment of Television Programs"

V sb. Televizion. tekhnika (Television Technology--collection of works), Moscow, "Svyaz", 1971, pp 253-265 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G193)

Translation: Data are given on a number of devices developed at the Moscow Electrical Engineering Institute of Communications for extending the possibilities of TV transmissions. Among these are: equipment for combining image and sound signals, a converter of TV standards, equipment for combining an actor's image with an artificial background, and a TV frame stopper. Five illustrations, bibliography of nineteen titles. N. S.

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1/2 015 UNCLASSIFIED PROCESSING DATE--02DCT70
TITLE--MOLECULAR MOTION IN CELLULOSE NITRATES STUDIED BY NUCLEAR MAGNETIC
RESONANCE -U-
AUTHOR--(05)--KOSTOCHKO, A.V., CHENBORISOVA, L.YA., MAKRAKOV, A.I.,
MAKOVCYEVA, G.N., FEOKTISTOVA, D.B.
COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(1), 72-4

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CELLULOSE, NITRATE, NUCLEAR MAGNETIC RESONANCE, PLASTICIZER,
PHTHALATE, ORGANIC PHOSPHATE, GLUCOSIDE, SPIN RELAXATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1942/0314

STEP NO--UR/0460/70/012/001/0072/0074

CIRC ACCESSION NO--AP0111508

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111508

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE MOL. MOTION IN CELLULOSE NITRATE (I) PLASTICIZED WITH 35-55PERCENT OF DI-OU PHTHALATE, TRICRESYL PHOSPHATE, OR GLYCEROL TRINITRATE WAS INVESTIGATED BY NMR SPECTRA AT MINUS 140 50 MINUS 20DEGREES. A PLOT OF 2ND MOMENT (DELTA H SUB2 PRIME2) VS. TEMP. FOR THE PLASTICIZED I SAMPLES INDICATED THAT DELTA H SUB2 PRIME2 WAS INVERSELY PROPORTIONAL TO TEMP. IN THE RANGE OF MINUS 10 TO PLUS 20DEGREES, PRESUMABLY DUE TO THE FLEXIBILITY OF THE PYRANOSE RING AND HINDERED MOTIONS ABOUT THE GLUCOSIDE BOND C,O,C. THE HIGH MAGNITUDE OF DELTA H SUB2 PRIME2 WAS ACCOUNTED FOR BY A HYPOTHESIS THAT THE CH SUB2 AND SUB2 GROUP REVOLVES ABOUT THE RING AT MINUS 140DEGREES AT A FREQUENCY OF 10 PRIME4, WHICH WAS CONSISTENT WITH THE EXPTL. DATA. INCREASED PLASTICIZER CONTENT CAUSED A CONTRACTION IN THE VMR BAND AND AN INCREASE IN THE SPIN SPIN RELAXATION TIME (CHARACTERISTIC OF MOL. PLASTICIZATION). THE SPIN SPIN RELAXATION TIME FOR I PLASTICIZED WITH EQUAL AMTS. OF EACH OF THE 3 PLASTICIZERS WERE SIMILAR.

UNCLASSIFIED

USSR

UDC: 621.391.822

MAKOVEYEVA, M. M.

"Transient Noises in Waveguide Communications Lines Caused by Concentrated Nonhomogeneities in the Line Channel"

Sb. nauchn. tr. TsNII svyazi (Collected Scientific Works of the Central Scientific Research Institute of Communications), 1970, vyp. 1, pp 87-97 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11A56)

Translation: Expressions are proposed for determining the power of transient noises due to transformations of wave modes which take place at concentrated nonhomogeneities in the line channel of a waveguide communications line, as well as noises resulting from reflections. The author evaluates the effect which echo signals of various groups have on the magnitude of this power. Numerical results are given for a system with 600 channels. Resumé.

USSR

UDC: 621.372.823.2:621.396.2

MAKOVEYEVA, M. M.

"Analysis of the Structure of a Linear Channel in Waveguide Communications Lines"

Tr. Mosk. elektrotekhn. in-ta svyazi (Works of the Moscow Electrical Engineering Institute of Communications), 1970, vyp., pp 22-28 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11B95)

Translation: The author determines transient noise level as a function of the positions of the elements in the waveguide channel of a communications line based on circular waveguides with H_{01} wave. Transient noises arise due to the presence of nonhomogeneities in the channel during transmission of signals which are frequency modulated by multichannel telephone communication. It is shown that the waveguide elements should be located as close as possible to the ends of the line, and either very near one another or as far as possible from one another in order to reduce the transient noises introduced by these elements. Three illustrations, bibliography of four titles.

A. K.

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USSR

UDC 621.382.3

KIR'YANOVA, V.M., MAKCVIY, A.N., PRAVDINA, T.V., STAROV, V.G., FURSCV, V.V.,
SHCHEVELEV, M.I.

"To The Problem Of The Physical Interconnection Of The Drift Of Certain Parameters
Of Silicon Drift Transistors"

Sb.Tr.po poluprovodnikovym materialam, priboram i kh primeneniyu (Collection Of
Works On Semiconductor Materials, Devices, And Their Application), Voronezh, 1971,
pp 75-80 (from RZh:Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No
11B255)

Translation: Using two types of silicon drift transistors as an example, the
dependence is studied of the electrical parameters on the dislocation density,
the content of O_2 and the resistivity of the initial Si, and the correlation be-
tween the values of the parameters and their changes in the process of current
aging. 1 tab. 2 ref. V.B.

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USSR

UDC: 629.78.062.2

VINOGRADOV, V. I., MAKOVLEV, V. I.

"Possibility of Using the Method of Frequency Characteristics for Study of Special Nonlinear Effects"

Tr. Mosk. Aviats. In-ta [Works of Moscow Institute of Aviation], 1972, No 240, pp 53-61 (Translated from Referativnyy Zhurnal Raketostroyeniye, No 6, 1973, Abstract No 6.41.191, by E. R. S.).

Translation: A method of harmonic linearization is used to study the properties of a nonlinear filter, the input signal in which passes through two independent channels; one of the channels forms the phase, while the other forms the magnitude of the signal, the output signal at the output of the filter being formed as the product of these signals. The dynamic properties of the nonlinear portion of the filter are analyzed for the first and third harmonics. It is demonstrated that the effectiveness of the filter cannot be determined by analysis of the first harmonic alone.

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USSR

UDC 629.78.017.2

SOKOLOV, N. I. and MAKOVLEV, V. I.

"Synthesis of Parametrically Invariant Compensation Systems in the Measurement of Two Output Magnitudes of the Control Object"

Tr. Mosk. Aviats. In-ta (Works of the Moscow Aviation Institute), 1972, No 240, pp 16-25 (from Referativnyy Zhurnal--Raketostroyeniye, No 5, May 73, Abstract No 5.41.140 by the authors)

Abstract: In the design of automatic control systems it is often possible to use data about several coordinates of the control object. Thus, for example, in the examination of the longitudinal movement of an aircraft it is difficult to obtain information about the angular velocity of pitch and normal overload. Consequently, the sensors of angular velocities and linear accelerations react differently to a change in the aircraft motion parameters which occur when the aircraft vibrates around its center of mass. If the sensor of linear accelerations reacts to a change of forces, occurring during a change in angles of attack, then the sensor of angular velocities reacts to the effect of moment changes. An approach is presented in this work toward synthesis of parametrically invariant compensation systems for the possibility of measuring two output magnitudes of the control object which provides for stability and the

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USSR

SOKOLOV, N. I. and MAKOVLEV, V. I., Tr. Mosk. Aviats. In-ta, 1972, No 240,
pp 16-25

required indicators of system quality in any finite range of parameter changes
of the control object. 1 figure, 3 bibliographic references.

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USSR

UDC: 543.42.062

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GANOVICH, M. V., KABANOVA, M. A., KRICHEVER, M. Ya., MAKOVZ, B. B., SOKOLOV, B. A.

"One-Channel, One-Beam Atomic Absorption Spectrophotometer Model AAS-1K"

Optich. i Titrometrich. Analizatory Zhidk. Sred [Optical and Titrometric Analyzers for Liquid Media], Reports of All Union Conference, 1971, Part 1, Tbilisi, 1971, pp 81-86 (translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 2, 1972, Abstract No 2.32.1097 by V. S. Krasnova)

Translation: A report is presented on the development of various types of atomic absorption spectrophotometers at the All Union Scientific Research Institute for Scientific Instruments (Leningrad). A description is presented of the basic circuits and designs used in creation of the model AAS-1K general laboratory device. The AAS-1K is a single structure, built into a common case, consisting of functionally independent blocks (B): the pulse power supply B for the hollow-cathode tube, the type BV-2 high-voltage power supply B, the specimen feed B, the gas feed and distribution B, the tube holder, heater, monochromator, measurement B and type KSP-4 recording potentiometer. 2 figures; 2 biblio refs.

1/1

Acc. Nr: **AP0047334** **M**

Ref. Code: **URO206**

PRIMARY SOURCE: Vestnik Dermatologii i Venerologii, 1970,
Nr / , pp **2730**

THE IMPORTANCE OF ELECTROENCEPHALOGRAPHY AS AN INDICATION FOR
PROPER SELECTION OF PATIENTS WITH ITCHING DERMATOSES FOR SONICA-
TION TREATMENT

N. S. Smelov, A. P. Khrunova, A. S. Bezzabotnov, V. S. Angelova, V. I. Makovoz

Summary

Clinico-laboratory observations demonstrated the efficacy of sonication in treatment of patients with itching dermatoses. Detection of an inhibition process according to EEG is a contraindication to sonication treatment. This permits to recommend electroencephalographic examination to be used for proper selection of patients for treatment.

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UDC 622.011.43

MAKOVSKIY, I. V.

"Study of the Spatial Operation of the Supporting Structural Elements of Tunnel Chambers During the Construction Process"

Sb. nauch. tr. VNI transp. str-va (Collected Scientific Works of the All-Union Scientific Research Institute of Transport Construction), 1971, vyp. 40, pp 4-9 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11V634)

Translation: The three-dimensional problem of simulating the monolithic concrete finishing of the roof of an underground chamber with a span of 25 meters, 50 meters long and 40 meters high built in strong rock is discussed. The method of simulation by equivalent materials is used. The rock is simulated by a mixture of sand, rosin and paraffin, and the roof finish is simulated by gypsum-sand mortar with a Young's modulus of $3 \cdot 10^4$ kg/cm². When simulating the operation of the underground structure, the basic steps of performing the operations used when building large-span chambers were reconstructed. The stressed state of the open cylindrical shell with free longitudinal edges supported on rigid end diaphragms was investigated by the electrotensometric method.

It is noted that as a result of the experiments performed, the nature of distribution of the forces in the shell and the contact pressures in the process of development of the rock core was established.

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1/2 013 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EVALUATION OF THE DESIGNS OF PNEUMATIC FLOTATION MACHINES -U-
AUTHOR--(03)--MAKOVSKIY, N.D., SERGEYEV, S.F., CHICHVAROV, V.M.
COUNTRY OF INFO--USSR
SOURCE--TSVET. METAL. 1970, 43(4), 82-5
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, EARTH SCIENCES AND
OCEANOGRAPHY
TOPIC TAGS--PNEUMATIC DEVICE, FLOTATION, COPPER ORE, PRODUCTION
EFFICIENCY, ORE BENEFICATION EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/1906 STEP NO--UR/0136/70/043/004/0032/0085
CIRC ACCESSION NO--AP0132168
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132168

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. AN EXPTL. MODEL OF A PNEUMATIC FLOTATION MACHINE (A) OF CHAMBER VOL. 1.6 M PRIME3 AND DEPTH 760 MM IS COMPARED WITH A STANDARD MECH. FLOTATION MACHINE (B). IN ALL CASES, THE EXTN. OF CU WAS GREATER IN A THAN IN B. THE PRODUCTIVITIES OF A AND B WERE 5-6.5 AND 2.5-3.0 M PRIME3-MIN, RESP. THE CU CONTENT OF THE TAILINGS WAS 0.05-0.13PERCENT LOWER, THE CU CONTENT OF THE UNCONCENTRATE WAS 0.35-1.35PERCENT LOWER, AND THE EXTN. WAS 2.5-9.0PERCENT HIGHER IN A THAN IN B. THE USE OF A INNUMEROUS FACTORIES IN PLACE OF CONVENTIONAL FLOTATION MACHINES SHOWS THAT THE FLOTATION RATE CAN BE INCREASED ON THE AV. BY 40PERCENT, AND THAT THE ENERGY CONSUMPTION CAN BE REDUCED BY 30-50PERCENT.

UNCLASSIFIED

USSR

UDC:629.78.015:533.6.001.5

MAKOVSKIY, Yu. F., SHUGAYEV, F. V.

"Arrival of a Shock Wave at a Wedge Washed by a Supersonic Stream"

Uch. Zap. Tsentr. Aerogidrodinam. In-ta [Scientific Writings of Central Institute of Aerodynamics and Hydrodynamics], 1973, 4, No 3, pp 115-117
(Translated from Referativnyy Zhurnal Raketostroyeniye, No 11, 1973, Abstract No 11.41.98, from the resume)

Translation: A description is presented of an experimental study of the impact of a shock wave on a wedge with a half aperture angle of 5° , located in a supersonic stream, with M number of the stream $M_1=1.46$ and of the incident shock wave $M_2=1.51$. Values of gas density in various areas of the flow produced using an interferometer are presented.

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USSR

UDC 629.19.533.6

GANIYEV, R. F., MAKRENKO, A. I.

"Concerning the Dynamics of a Deformable Solid in Free Flight"

Kiev, Dinamika Sistem Tverd. i Zhidk. Tel (Dynamics of Solid and Liquid Systems), Institute of Mechanics, Academy of Sciences, Ukrainian SSR, No 6, 1971, pp 16-26, illustrated, Deposit No 3378-71 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2B319, DEP, Authors' Abstract)

Translation: The differential equations of motion of a deformable body are derived on the basis of the Hamilton-Ostrogradskiy principle. In an equation of motion of the body are included its elastic displacements; these can exert a substantial influence upon the motion of the center of mass, and in relation to the center of mass of an object as a solid body. Also obtained are non-linear equations of the oscillation of a unidimensional object in a moveable system of coordinates. The stability of motion of a unidimensional object in a supersonic flow of gas under the influence of a constant tracking force is investigated in a linear formulation. During investigation of the stability, a fairly large value of the angular velocity of rotation of the object around the longitudinal axis is assumed.

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USSR

UDC 621.35.035.2

ANICIMOV, R. I., and MAKRENKO, T. S.

"Study of the Kinetics During the Determination of Electrode Equilibrium in the System Fe^{+2}/Fe^{+3} on a Platinum Electrode"

Nekotor. probl. kinetiki elektrod. processes (Some Problems in the Kinetics of Electrode Processes), Topic Books From the Dal'nevost University, Vladivostok, 1972, pp 92-95 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973 Abstract No 8L212, by L. S. Kanevskiy)

Translation: An oscilloscope was used to study the kinetics of the interactions in the Fe^{+2}/Fe^{+3} system with the de-gassed surface of a platinum electrode having different potentials. It was shown that the velocity of establishing the value of the oxidation reduction potential decreased with an increase in the potential of the electrode. It was assumed that the reason for this phenomena is related to the heterogeneity of the platinum electrode and presence on its surface of a large number of defects (ridges and peaks).

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USSR

UDC: 621.396.967:551.501.81

USPENSKIY, M. V., PONOMAREV, Ye. A., SHAFTAN, V. A., MAKRYGIN, A. M.

"On the Sensitivity of an Incoherent Radar Station for Detecting Radio Reflections from a Polar Aurora"

V sb. Issled. po geomagnetizmu. Aeron. i fiz. Solntsa (Research on Geomagnetism. Aeronomy and Solar Physics--collection of works), Vyp. 13, Irkutsk, 1970, pp 150-160 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1G57)

Translation: The authors study the sensitivity (energy potential) of an incoherent radar station operating in the mode of search, detection and automatic registration of radio reflections from a polar aurora as a function of the parameters of the radiated signal, the characteristics of the reflections, and methods of registration. Resumé.

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USSR

UDC 539.374

MAKSAK, V. I., DOSHCHINSKIY, G. A.

"Investigation of Large Plastic Deformations Under a Complex Load"

Izv. Tomsk. politekhn. in-ta (Herald of Tomsk Polytechnical Institute), 1970, Vol. 173, pp 10-12 (from RZh-Mekhanika, No 9, Sep 71, Abstract No 9V424)

Translation: A method previously proposed by the authors is used to study large plastic deformations (Izv. Tomsk. politekhn. in-ta, 1970, Vol. 173, pp 3-9; RZhMekh., 1971, Abstract No 8V419). Two cylindrical samples of similar diameters d_1 and d_2 were submitted to stretching and twisting; the differences in the axial forces P_1 - P_2 applied to them and the moments M_1 - M_2 are interpreted as a load applied to a thin-walled tube of thickness $(d_1-d_2)/2$. The "tube" was tested according to the following program: a simple twisting load up to the value $\sigma_z = \sigma_z^0$ corresponding to a plastic deformation e_z^0 in several tenths of percent and then deformation at $\sigma_z = \text{const} = \sigma_z^0$. A graph of $\Delta e_z^1 \sim S$, where S is the

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USSR

MAKSAK, V. I., DOSHCHINSKIY, G. A., Izv. Tomsk. politekhn. in-ta, 1970, Vol. 173, pp 10-12

length of the arc of the path of the complex load, is given for the segment of the complex load $\sigma_i = \sigma_i^0$. Qualitatively the results of the experiments are close to similar experiments of the authors for small deformations (see, for example, Inzh. zh. Mekhan. tverd. tela, 1966, No. 3, pp 153-155: RZhMekh, 1966, Abstract No 12V197), however the very small increment Δe_i is considerable as compared with e_i^0 in the period of the complex load, when $S = \sigma_i^0$. R. A. Vasin.

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--STABILITY IN TENSION AND STRENGTH TESTS OF TUBES -U-
AUTHOR--(02)-MAKSAK, V.I., CHERNOMORCHENKO, V.I.
COUNTRY OF INFO--USSR
SOURCE--PROBLEMY PROCHNOSTI, VOL. 2, MAY 1970, P. 26,27
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--PLASTIC DEFORMATION, MECHANICAL STRESS, STRAIN, METAL TUBE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1438 STEP NO--UR/3663/70/002/000/0026/0027
CIRC ACCESSION NO--AP0135109
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135109

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS AIMED AT CLARIFYING AN UNEXPECTED EXPERIMENTAL RESULT ACCORDING TO WHICH FAILURE OF THIN WALLED TUBULAR SAMPLES CAN OCCUR AT VARIOUS STRESS AND STRAIN INTENSITIES, DEPENDING ON THE TYPE OF THE STRESS STRAIN STATE. IT IS SHOWN THAT THIS PHENOMENON CAN BE EXPLAINED IN TERMS OF INSTABILITY OF PLASTIC DEFORMATION UNDER TENSION.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--MEANS OF LOWERING THE TOXIC PROPERTIES OF UREA -U-
AUTHOR--(03)-MAKSAKOV, V.YA., MOSHKEVICH, V.B., MOSOLOVA, E.S.
COUNTRY OF INFO--USSR
SOURCE--VETERINARIYA (MOSCOW) 1970, 46(4), 79-80
DATE PUBLISHED-----70
SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ANIMAL HUSBANDRY, UREA, DIET, TOXICITY, PROTECTIVE COATING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/1908 STEP NO--UR/0346/70/046/001/0079/0080
CIRC ACCESSION NO--AP0127309
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0127309

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO REDUCE THE TOXIC EFFECT OF UREA AS A N SOURCE FOR RUMINANTS, 2 MEHTOS OF FEEDING UREA, USING COATING WITH SHELLAC, WERE WORKED OUT. (A) ONE KG OF UREA GRANULES OF 1-2.5 MM DIAM. IS MIXED WITH 160 ML OF 20PERCENT SHELLAC IN ETOH ACETONE (7:3) AND DRIED IN AIR. (B) THE COMBINED DIET CONTG. UREA IS PELLETED AND COATED AS IN (A). IN EXPTS. CARRIED OUT IN BULLS WITH A RUMEN FISTUAL, FEEDING (A) OR (B) CONTG. 100 G UREA SLOWED THE RELEASE OF NH SUB3 BY 32 AND 23PERCENT, RESP., COMPARED WITH THE CONTROLS FED WITH UNCOATED DIETS. WHEN 100 G OF UNCOATED UREA WAS GIVEN, TOXIC SIGNS (SALIVATION, ATONY OF THE RUMEN, AND MUSCLE TWITCHING) APPEARED WITHIN 2 HR, WITH NH SUB3 CONCNS. IN PLASMA AND RUMEN 188 GAMMA PERCENT 61.6 MGPERCENT, RESP. NO TOXID SIGNS AND LOWER NH SUB3 LEVELS WERE SEEN IN ANIMALS FED COATED UREA (158 GAMMA PERCENT AND 48.7 MG PERCENT, RESP.). IN CHRONIC FEEDING EXPTS. WITH THE COATED DIETS (A) AND (B) FOR SIMILAR TO 100 DAYS, THERE WERE INCREASES IN THE PLASMA TOTAL PROTEIN BY 0.79PERCENT, IN N RETENTION BY 9-10PERCENT, AND IN MEAN DAILY WT. GAINS BY 9.6PERCENT, AS COMPARED WITH THE CONTROLS. FACILITY: NAUCH.-ISSLED, INST. ZHIVOTNOVOD. LESOSTEPI POLES'YA, KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC 681.327

LEVSHIN, V.I.. MAKSAKOV, Yu.N.

"A Memory Device"

USSR Author's Certificate No. 253143, Filed 3/06/68, Published 4/05/70 (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No. 4, 1971, Abstract No. 4B287P by GV)

Translation: Memory units with linear retrieval containing matrices of memory elements made of two cores through which number and clear busses are passed and to which read and write pulse shapers are connected are well known. These devices are not suitable for performance of the bit-by-bit logic operations of disjunction and conjunction. In the device described this shortcoming is eliminated by the fact that it contains an additional read pulse shaper, the output of which is connected to a bus passing through all cores on the three number lines. Two lines are used to write the initial operands, while the third is used to write the symbol of the logic operation being performed: a "1" for the operation of disjunction and a "0" for the operation of conjunction. This expands the logic capabilities of the device. 1 fig.

1/1

- 19 -

USSR

UDC: 621.791.793

KROSHKIN, V. A., TSAREVSKIY, V. V., KABANOV, N. M., MAKSHANOV, V. S., FEDOSEYEV, B. A., GEYNISH, Z. V., GORKUNENKO, G. N., and GUBANOV, A. S., All-Union Scientific Research, Planning Technological Institute of Chemical Petroleum Equipment

"Electro-Slag Welding With Concomitant Normalization by the Induction Method"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 73, pp 48-51

Abstract: The authors study methods for increasing the resistance to brittle fracture of joints made from low-alloy grades of steel and which were electro-slag welded. The results show that the coincidence of the heat cycles ensures the required impact strength for all joint zones up to 80 mm thick down to -70°C during the pilot introduction of the new technology for the electro-slag welding of the O9G2S grade steel. The developed industrial frequency, induction unit makes it possible to coincide the heat cycles of electro-slag welding with the concomitant normalization of the longitudinal and annular seams on large and small equipment made from cold-resistant and heat-resistant, low-alloy grades of steel. Further study is required to select the optimal heat cycles for electro-slag welding and normalization of joints as a function of thickness and steel grade.

1/1

3

USSR

UDC 621.382.3

BARNEM, R. D., HOLONYAK, N. N., KORB, G. V., MAKSI, G. M., SAYFERS, D. R.,
WOODHAUSE, D. B., and ALFYEROV, Zh. I.

"AlGaAsP Solid Solutions and Injection Lasers With Two Heterojunctions On
Their Base"

Fizika i tekhnika poluprovodnikov, Vol 6, No 1, January 1972, pp 97-102

Abstract: The solid solutions $\text{Al}_y\text{Ga}_{1-y}\text{As}_{1-x}\text{P}_x$ ($y = 0.0-0.2$; $x = 0.0-0.2$) are obtained by the fluid epitaxy method. The dependence is considered of the width of the forbidden band of the solid solutions on the compound and the dependence of the concentration of phosphorous in the epitaxial layers of AlGaAsP on the growth temperature is investigated. Injection lasers are obtained with the two heterojunctions $n\text{-Al}_y\text{Ga}_{1-y}\text{As}_{1-x}\text{P}_x/p\text{-Al}_y\text{Ga}_{1-y}\text{As}_{1-x}\text{P}_x$ with threshold currents $\sim 10^4 \text{ A/cm}^2$ at room temperature. The authors thank D.V. Bird and F.V. Williams (Monsanto, St. Louis) for the substrate and for technical assistance — K.A. Cool, B.L. Marshall, M. Stone, and Yuri Moroz. University Of Illinois, Urbana, Illinois, USA; Physicotechnical Institute imeni A.F. Ioffe, AS, USSR, Leningrad. Received by editors 28 June 1971. 6 fig. 14 ref.

1/1

1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--FORMATION OF TEREPHTHALIC AND ISOPHTHALIC ACID DICHLORIDES DURING
THE REACTION OF 1,4, AND 1,3,BIS(TRICHLOROMETHYL) BENZENES WITH ACETIC
AUTHOR--(03)-USPENSKAYA, I.N., MAKSICHEVA, A.I., MOTSAREV, G.V.
COUNTRY OF INFO--USSR, FRANCE
SOURCE--ZH. ORG. KHIM. 1970, 6(5), 1027-32
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ACID CATALYSIS, CHEMICAL SYNTHESIS, PHTHALIC ACID, CARBOXYLIC
ACID CHLORIDE, ACETIC ACID, BENZENE DERIVATIVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1279 STEP NO--UR/0366/70/006/005/1027/1032
CIRC ACCESSION NO--AP0134953
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134953

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE REACTION PERFORMED AS DESCRIBED EARLIER (FRENCH 820,697) WITH H SUB2 SO SUB4 AS THE CATALYST GIVES A MIXT. OF PRODUCTS DIFFICULT TO PURIFY. THE USE OF FECL SUB3 AND 1:2 C SUB6 H SUB4 (CCL SUB3) SUB2-1,4-ACOH OR C SUB6 H SUB4 (CCL SUB3) SUB2-1,3-ACOH RATIOS GAVE 95-7PERCENT C SUB6 H SUB4 (COCL) SUB2-1,4 OR C SUB6 H SUB4 (COCL) SUB2-1,3. ACCL, ALSO FORMED IN THE REACTION, IS EASILY REMOVED BY DISTN. A REACTION SCHEME WAS GIVEN.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--AGE SPECIFIC DIFFERENCES OF THE CATALASE ACTIVITY AND CONCENTRATION
HEMOLYSED BLOOD PROTEIN IN PATIENTS WITH A SEVERE COURSE OF BRONCHIAL
AUTHOR--(04)-BULATOV, P.K., KOMOV, V.P., MAKSIDOVA, A.G., BERGER, R.G.
COUNTRY OF INFO--USSR
SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 5, PP 78-80
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RESPIRATORY SYSTEM DISEASE, BLOOD CHEMISTRY, HEMOLYSIS,
CATALASE, BIOLOGIC AGING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0474 STEP NO--UR/0504/70/042/005/0078/0080
CIRC ACCESSION NO--AP0121148
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--30UCT70

CIRC ACCESSION NO--AP0121148

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED THE ACTIVITY OF CATALASE AND PROTEIN CONCENTRATION OF HEMOLYSED BLOOD IN PATIENTS WITH A SEVERE COURSE OF BRONCHIAL ASTHMA. THERE WAS SEEN A SHARP FLUCTUATION IN THE ENZYMIC ACTIVITY AND PROTEIN CONCENTRATION DEPENDING UPON THE PHASE OF THE DISEASE AND THE PATIENT'S AGE. THE AUTHORS ASSUME THAT THE CHANGES OF THE CATALASE ACTIVITY ARE CAUSED ON THE ONE HAND BY A GENERAL PATHOLOGY OF TISSUE RESPIRATION AND ON THE OTHER ONE BY CERTAIN COMPENSATORY FUNCTIONS OF THE ORGANISM.

FACILITY: KAFEDRA POSPITAL'NOY TERAPII I Leningrad. MEDITSINSKOGO INSTITUTA IM. I. P. PAVLOVA. FACILITY: KAFEDRA BIOKHIMII Leningrad. KHIMIKO-FARMATSEVTICHESKOGO INSTITUTA.

UNCLASSIFIED

USSR

TSAREGRADSKIY, L. Ye., CHERNYI, N. Ye., MAKSIMENKO, A. A.

"Tree-Type File Processing Subroutines for the Minsk-22 Digital Computer"

Avtomatiz. Upr. Prom. Predpriyatiyami [Automation of the Control of Industrial Enterprises -- Collection of Works], Kiev, Tekhnika Press, 1972, pp 107-110 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V646, by the authors).

Translation: Problems of the organization of tree-type files encountered in development of automatic control systems are studied. A set of standard programs for processing of tree-type files is described. In particular, the set includes the operations of formation of information retrieval files, as well as certain other standard file processing operations. The problem of placement of information in the file is presented as a "knapsack problem."

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--ACCELERATORS FOR COLD CURING OF POLYESTER ACRYLATE RESINS -U-
AUTHOR--(U2)-TARASENKO, N.F., MAKSIMENKO, A.S.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. UKR. 1970, (1) P 12
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS
TOPIC TAGS--ACRYLATE, POLYESTER RESIN, CURING AGENT, CUMENE,
HYDROPEROXIDE, COBALT COMPOUND, CHEMICAL STABILITY, MECHANICAL
STRENGTH/(U)311TKHS POLYESTER RESIN

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY RELL/FRAME--1992/1510 STEP NO--UR/0436/70/000/001/0012/0012
CIRC ACCESSION NO--AP0112504
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112504

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPN. 311-TKHS (MIXT. OF POLYESTERS) WAS CURED AT ROOM TEMP. WITH NH SUB4 CO(SOLN) SUB4, CO RESINATE (I), OR MN RESINATE. THESE HARDENERS BY THEMSELVES GAVE SLOW CURING RATES, BUT WITH CUMENE HYDROPEROXIDE (II) THEIR HARDENING TIME (T) WAS REDUCED TO SMALLER THAN OR EQUAL TO 24 HR AND THE CURE WAS 88-90PERCENT COMPLETE. THE TYPICAL COMPN. CONSISTED OF 311-TKHS 100, TALC 100, I 10, II 3 PARTS. SUCH COMPNS. RESISTED THE ACTION OF 36PERCENT HCL SOLN., ACOH, AC SUB2 O, 5PERCENT HNO SUB3 SOLN., 10PERCENT ALK. SOLN., OR 10PERCENT NA SUB2 CO SUB3 AT 50-60DEGREES FOR 30 DAYS AND THEIR MECH. STRENGTH WAS EQUIV. TO 311-TKHS COMPNS. CURED WITH II AND CO NAPHTHENATE AT HIGH TEMPS.

UNCLASSIFIED

USSR

UDC: 621.372.01:513.83

MAKSIMENKOV, A. V.

"On Determining the Shortest Chains in a Graph"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1972, vyp. 10, pp 64-68 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12A177 [résumé])

Translation: A computer algorithm is given for a conventional method of finding the shortest chains between given vertices of a graph. In order to realize the algorithm, which enables finding all the shortest chains between given vertices of a graph, only very simple logic operations are required.

1/1

USSR

UDC: 518.5:681.3.06

MAKSIMENKOV, A. V.

"An Algorithm for Solving the Determinability of the Bonds Between Elements in Problems of Structural Design"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronic Technology), 1971, vyp. 6, pp 105-116 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V976)

Translation: In the general case on stages of distribution of the elements of the principal electrical circuit of a logic module among integrated circuits and location of the elements on each plate, the number of connections between the elements is not a strictly determined factor since most of the connections in real circuits are edges of complete graphs with vertices numbering more than two. A solution is presented in the article for the problem of determinability of connections with regard to prediction of the shape of configurations of the conductors in the stage of tracing the connections. The method is based on determining the optimally subtending trees for all complete graphs of the initial diagram. A digital computer realization of the given algorithm is presented. Author's abstract.
1/1

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USSR

UDC 669.721.5:536.422.1

MAKSIMENKO, G. I., LYULICHEV, A. N., CURPRININ, F. I., and KORSUNSKAYA, I. G.
Kharkov

"Effect of Surrounding Medium on the Process of Thermal Failure of the Surface
of Magnesium Alloys in a Vacuum"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 106-112

Abstract: The purpose of this work was to study the effect of the surrounding medium on the initial stage of sublimation, i.e., on the process of thermal failure of the surface of magnesium alloys in a vacuum. The magnesium alloy tested was MA-2. Specifically investigated were the effects of vacuum depth, temperature of the surfaces and medium surrounding the sample, and composition of residual gases in the vacuum chamber. The better the vacuum the better chance there is to exclude the formation of oxide films on the sample due to diffusion processes. Temperature of the sample and surrounding medium increase the possibility of oxide formation as well as the composition of residual gases. Of the three effects studied, the composition of the residual gases contributes the most toward thermal failure of the alloy's surface. It was noted that the composition of the residual gases between the sample and cryogenic tanks differed substantially from that of the gases on the opposite side of the sample. 5 figures, 4 bibliographic references.

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DETECTION OF ELECTRON BY SURFACE BARRIER SILICON DETECTORS
AGAINST BACKGROUND OF GAMMA RAYS OF COMPARABLE ENERGY +U-
AUTHOR-(03)-MAKSIMENKO, B.P., BEZMEHNITSYN, V.N., MITIN, A.A.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. (USSR); 28: 71-3 (JAN 1970)

DATE PUBLISHED----JAN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR DETECTOR, CONVERSION ELECTRON SPECTRUM, GAMMA
BACKGROUND, SILICON SEMICONDUCTOR, COBALT ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0225

STEP NO--UR/0089/70/028/000/0071/0073

CIRC ACCESSION NO--AP0105301

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0105301

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SURFACE BARRIER SILICON COUNTER WITH A 40 TIMES 40 MM NAI(TL) CRYSTAL WAS USED FOR SPECTROMETRIC STUDIES OF ELECTRONS USING A PRIME57 CO SOURCE EMITTING 14, 122, AND 136 KEV GAMMA QUANTA AND ELECTRONS OF INTERNAL CONVERSION WITH 115 AND 129 KEV ENERGIES. THE RESULTS SHOWED THE COUNTER WAS EFFECTIVE IN RECORDING THE ELECTRONS UNDER CONDITIONS OF A STRONG BACKGROUND FIELD OF GAMMA RADIATION.

UNCLASSIFIED

1/2 023

TITLE--RECORDING OF 10-100 KEV ELECTRONS BY SURFACE BARRIER SILICON COUNTERS -U- UNCLASSIFIED PROCESSING DATE--16OCT70

AUTHOR--MAKSIMENKO, B.P.

COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, 1, 78-80

DATE PUBLISHED-----70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--SEMICONDUCTOR DETECTOR, SILICON SEMICONDUCTOR, BETA PARTICLE DETECTOR, ELECTRON SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1991/1073

STEP NO--UR/0120/70/001/000/0078/0080

CIRC ACCESSION NO--AP0110763

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110763

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AMPLITUDE CHARACTERISTICS AND RESOLN. WERE INVESTIGATED OF SURFACE BARRIER COUNTERS DURING REGISTRATION OF 10-100 KEV E AT 18DEGREES. THE N-SI COUNTERS WITH A SP. RESISTANCE OF SIMILAR TO 150 OHM-CM HAD A WORKING SURFACE OF SIMILAR TO 5 MM PRIME2 WITH A LAYER THICKNESS OF AU SIMILAR TO 40 MU G-CM PRIME2. FULL WIDTH AT HALF MAX. EQUALLED SIMILAR TO 4.7 KEV FOR ENERGIES OF 15-40 KEV AND INCREASED TO SIMILAR TO 6 KEV AT 100 KEV.

UNCLASSIFIED

1/2 021 UNCLASSIFIED M PROCESSING DATE--11SEP70
TITLE--PRIMARY CANCER OF THE LIVER -U-
AUTHOR--MAKAROV, F.D., SEMENOV, A.P., MAKSIMENKO, I.D., MAKSIMENKO, O.I.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 9-12
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LIVER, CANCER, DIAGNOSTIC MEDICINE, AUTOPSY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/0799 STEP NO--U3/0475/70/000/003/0007/0012
CIRC ACCESSION NO--AP0102762
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102762

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. OF 3552 AUTOPSIES PRIMARY CANCER OF THE LIVER WAS FOUND IN 26 CASES (0.73PERCENT). AMONG CANCERS OF OTHER SITES IT OCCUPIED 4.6PERCENT. MALES 22, FEMALES 4; AGE: FROM 20 TO 80 YEARS. PRIMARY CANCER OF THE LIVER WAS CLINICALLY DIAGNOSED IN 11 CASES. CLINICAL DIAGNOSIS PROVED PRACTICALLY POSSIBLE IN THE TERMINAL STAGE. PECULIAR CHARACTERISTICS OF THE CLINICAL COURSE ARE DESCRIBED. INDICATIONS FOR DIAGNOSTIC LAPAROTOMY ARE DISCUSSED.

UNCLASSIFIED

Biophysics

USSR

MAKSIMENKO, L. A., Kuban State University, Krasnodar

"Demodulation of an Afferent Signal at First Synaptic Contact Level by Negative Feedback"

Moscow, Biofizika, Vol 18, No 5, Sep/Oct 73, pp 902-906

Abstract: Experiments were conducted on cats to determine the mechanisms of presynaptic depolarization by employing a sinusoidally modulated series of impulses applied to the popliteal nerve. The response reaction was determined by the amplitude of the N_1 component of the dorsal horn of the spinal cord. Intense inhibition of modulation was observed in the substantia gelatinosa at the entrance into the polysynaptic reflex arch. The latter would indicate that presynaptic inhibition relies on negative feedback.

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USSR

UDC: 533.69.01+533.662.013

ANTONOV, A. M., YERMOLENKO, M. S., MAKSIMENKO, L. A.

"Flow Around a Thin Wing With Escaping Jets"

Tr. II Resp. konf. po aerogidromekh., teploobmenu i massoobmenu. Sekts. "Aerodynamika bol'sh. skorostey" (Works of the Second Republic Conference on Aerohydraulics, Heat Exchange and Mass Exchange. "High-Velocity Aerodynamics" Section), Kiev, Kiev University, 1971, pp 165-167 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B369)

Translation: In order to solve the problem of flow of an ideal compressible fluid around a thin wing of finite span from which jets are escaping, a system of discrete associated horseshoe vortices and a system of free straight vortices are substituted for the wing. The equation for the axis of a jet is given by some semi-empirical formula. The jet is broken down into individual sections, and a vortex strip with known intensity is substituted for each of these sections. The distribution of the load on the surface of the wing is determined from the condition of non-flow in the corresponding number of discrete computational points where the inductive velocities from the wing and jet vortex systems are calculated from the Biot-Savart formula. V. I. Putyata.

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USSR

UDC: 621.762.045

MAKSIMENKO, L. A., SHTERN, M. B., RADOMYSEL'SKIY, I. D., SERDYUK, G. G., Kiev State University Imeni T. G. Shevchenko, Institute of Problems of Material Science, Academy of Sciences, URSR

"The Existence of Strong Shock Waves During High-Speed Pressing of Metal Powders"

Kiev, Poroshkovaya Metallurgiya, No 4, 1972, pp 17-20.

Abstract: It is proven that strong shock waves, i.e., discontinuities of all parameters of the compacted medium (density, pressure, velocity, entropy) can arise with high-speed (impact) loading of metal powders. The authors observed compression jumps upon impact pressing of type PZh2M iron powder with initial pressing speeds of over 100 m/sec. This provides experimental confirmation of the existence of strong shock waves in metal powders when the pressing speed exceeds the speed of sound in the powder.

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USSR

UDC 613.647:614.89

MAKSIMENKO, N. V., YEVTUSHENKO, G. I., and GONCHAROVA, N. N., Khar'kov
Scientific Research Institute of Labor Hygiene and Occupational Diseases,
Khar'kov

"Fundamentals of the Screening of Electromagnetic Fields"

Moscow, Gigiyena i Sanitariya, No 2, Feb 73, pp 108-110

Abstract: Exposure of personnel to the action of electromagnetic fields may constitute an occupational hazard. The most effective procedure for protecting personnel against these fields is electromagnetic screening. The simplest method of carrying out engineering calculations for metal screens to be used for this purpose that are effective in the long-wave range has been proposed by D. N. Shapiro (Radiotekhnika, No 4, 1955). Screens calculated by this method are being applied for the elimination of radio disturbances at present.

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USSR

UDC 543.38+576.80

~~MAKSIENKO~~ O. A., ZYUKOVA, L. A., and FEDOROVICH, R. M., All Union Scientific Research Institute of Protein Biosynthesis

"Determination of Total Soluble Organic Acids in the Culture Fluid During Deep Cultivation of Some Micro-organisms"

Moscow, Prikladnaya Biokhimiya i Mikrobiologiya, Vol 6, No 4, Jul/Aug 70, pp 462-466

Abstract: A modification of the Van Slyke-Palmer method was used to determine potentiometrically the concentration of carboxylic acids in the culture fluid during deep cultivation of certain micro-organisms. The phosphates with calcium hydroxide and the calcium salts titrated with dilute hydrochloric acid. The end point of titration was established for valeric acid and then tested on propionic, caprylic, and adipic acids. The mean relative error for these acids ranged from 2 to 8%. Candida yeasts were used in the experiments. The procedure makes it possible to determine total carboxylic acids more accurately than by direct potentiometric titration of fatty acids. It is particularly useful when the concentrations of carboxylic acids are so low that the calcium salts do not precipitate.

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1/2 021
UNCLASSIFIED M
TITLE--PRIMARY CANCER OF THE LIVER -U-
PROCESSING DATE--11SEP70
AUTHOR--MAKAROV, F.D., SEMENOV, A.P., MAKSIMENKO, I.D., MAKSIMENKO, O.I.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 9-12
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LIVER, CANCER, DIAGNOSTIC MEDICINE, AUTOPSY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/0799
STEP NO--UR/0475/70/0007003/0007/0012
CIRC ACCESSION NO--AP0102762
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102762

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. OF 3552 AUTOPSIES PRIMARY CANCER OF THE LIVER WAS FOUND IN 26 CASES (0.73PERCENT), AMONG CANCERS OF OTHER SITES IT OCCUPIED 4.6PERCENT. MALES 22, FEMALES 4; AGE: FROM 20 TO 80 YEARS. PRIMARY CANCER OF THE LIVER WAS CLINICALLY DIAGNOSED IN 11 CASES. CLINICAL DIAGNOSIS PROVED PRACTICALLY POSSIBLE IN THE TERMINAL STAGE. PECULIAR CHARACTERISTICS OF THE CLINICAL COURSE ARE DESCRIBED. INDICATIONS FOR DIAGNOSTIC LAPAROTOMY ARE DISCUSSED.

UNCLASSIFIED

USSR

UDC 547.242

MIFTAKHOVA, R. G., MAKSIMENKO, S. G., and KUSOV, YU. I., Kazan' Chemical-
Technological Institute Imeni S. M. Kirov

"Aldoxime Esters of Alkyl- and Dialkylarsinous Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1969-1972

Abstract: Aldoxime esters of alkyl- and dialkylarsinous acids were synthesized by the reaction of aldoximes (acetaldoxime, propionaldoxime, butyraldoxime) with haloarsines in presence of triethylamine. The products are colorless liquids with a sharp, unpleasant odor.

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USSR

BUDAGOV, YU. A., VINOGRADOV, V. B., VOLOD'KO, A. G., DZHELEPOV, V. P.,
KLADNITSKIY, V. S., KUTSIDI, N. K., Tbilisi State University, LOMAKIN, YU. F.,
NAKSIMENKO, Y. A., MARTINSKA, G., FLYAGIN, V. B., KHARZHEYEV, YU. N., and
SHANDOR, L.

"Possible Existence of $\pi^- \delta^-$ -Resonance With a Mass of 270 MeV"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13,
No 12, 20 Jun 71, pp 665-668

Abstract: The preliminary results of this experiment were presented in 1970 at the Fifteenth International Conference on High-Energy Physics in Kiev. The authors find experimental signs of the possible existence of a new meson resonance. They observe a narrow peak when $M = 270$ MeV in the spectrum of effective masses of the system $\pi^- \delta^-$, which forms in the reaction $\pi^- p \rightarrow \pi^- p + (2.3)\delta^-$ at 5 GeV/c. The authors study events of the type $\pi^- p \rightarrow \pi^- p + (2.3)\delta^-$ which satisfy the following conditions: (1) the protons are identified by ionization and stopping in the camera, and the impulses of the protons do not exceed 500 MeV/c; (2) the length of the tracks of secondary charged particles from the star is no less than 2 cm, and the impulses of these particles are measured with an

1/2

USSR

BUDAGOV, YU. A., et al., Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 12, 20 Jun 71, pp 665-668

accuracy no worse than 30%; (3) the π -quanta have impulses greater than 30 MeV/c, measured with an accuracy no worse than 25%; (4) the scattering angles between the two π -quanta do not exceed 2° . As a result of the experiment, the authors find that the effect which they observed is caused by the existence of a new meson resonance. The figures depict the distribution by effective mass of quanta. The article contains 2 figures and a bibliography of 7 entries.

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Publications

USSR

MAKSIMENKO, V. A., NEKHOROSHEV, and SUROVIKIN, V.

Diving (Vodolaznoye Delo)

Moscow, 1971, DOSAAF Publishing House, 288 pp

Translation: Annotation: This book is intended for the training of divers and it was written in accordance with the program for training 3d class divers.

For 1st and 2d class divers, the book may serve as a practical manual and reference tool on the operation and care of diving equipment and on safety measures and performance of a variety of diving tasks.

Besides the principal authors V. P. Maksimenko, A. S. Nekhoroshev, and the late V. D. Surovkin, the following specialists in diving and hydraulic engineering took part in writing the book: V. S. Razvodoskiy (Chapter 5), P. P. Nikitin (chapter 6), T. S. Leybovich (Chapter 7 and Chapter 10, in part), Yu. K. Senatiskiy (Chapter 7 in part), A. A. Rogov (chapter 8), and A. P. Loyko (Chapter 9).

The authors thank the diving specialists A. M. Gerasimov, B. V. Gromadskiy, N. Kh. Kesopulo, I. I. Rebink, and the physician-physiologist V. I. Tyurin for their help in writing this book.

Please send all comments and suggestions to Moscow, B-66, Novo-Ryazan-skaya, 26, DOSAAF Publishing House.

1/8

USSR

MAKSIMENKO, V. A., et al., DCSAAF Publishing House, 288 pp

Introduction: Every year our country sees the construction of more and more gigantic hydraulic works, digging of thousands of kilometers of canals, laying of oil and gas pipes, and launching of river and ocean-going vessels. And everywhere, in all branches of the economy, thousands of highly skilled masters of diving are in demand.

Present-day diving is one of man's production activities which embraces all matters concerned with people descending in water in special equipment to perform underwater tasks or other assignments.

The development of underwater sports has led to the appearance of thousands of persons with diving skills. Underwater sports have great economic and military-applied significance.

Diving is hard work, but noble and honorable. Besides possessing good health, a knowledge of complex equipment, and familiarity with the principles of the physiology of underwater submersion, a diver must have a strong will, stamina, and a good eye. And this is not all. He must also be knowledgeable in locksmithing, carpentry, rigging, electric welding and so forth.

Rating of divers. Divers are divided into three classes according to their rating: first, second, and third.

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USSR

MAKSIMENKO, V. A., et al., DOSAAF Publishing House, 288 pp

The highest rating is that of "diving specialist". Depending on the job, diving specialists are subdivided into senior diving and chief diving specialists.

Diving work is divided into group I, II, and III according to the degree of difficulty involved.

Diving ratings are assigned by diving qualification commissions after suitable training, further training, and passing of examinations.

To keep his rating, a diver must work under water a certain number of hours a year. For example, a 3rd class diver of group I must complete at least 180 hours and those of groups II and III 90 and 50 hours, respectively.

The working conditions of divers differ substantially from those of persons on land. For this reason they have a shorter workday and receive additional pay for dives, lump-sum bonuses, and extra annual leave.

If a diver follows the established rules, he will be completely safe when under water.

This book, which was written in accordance with the program for training 3d class divers and with the "Standard Regulations for Work Safety in Diving," takes up all the fundamental questions concerned with underwater work as determined by the program

3/8

USSR

MAKSIMENKO, V. A., et al., DOSAAF Publishing House, 288 pp

CONTENTS

Introduction

From a plunger to a diver-deep-water man

Chapter I. PHYSICAL AND PHYSIOLOGICAL CHARACTERISTICS OF DIVING

Physical principles of diving

Brief characteristics of artificial mixtures used in diving

Regenerative substances used in diving

Exchange of gas mixtures in a diving suit

Concept of partial pressure of each gas forming atmospheric air

Main properties of water

Bouyancy and stability of divers

Propagation of light and sound in water

Brief information on human anatomy and physiology

Physiological characteristics of diving (mechanical factors)

Chapter II. DIVING EQUIPMENT

Definitions, classification, and comparative characteristics of diving equipment

Ventilation equipment

Injector-regenerative equipment

4/8

- 99 -

USSR

MAKSIMENKO, V. A., et al., DOSAAF Publishing House, 288 pp

Regenerative diving equipment with an IDA-57 oxygen apparatus

Diving equipment with an AVM-1M air tank

Ukraine-2 aqualung

SHAP-40 hose apparatus

Diving suits

All-purpose diving equipment

Maintenance and periodic check of diving equipment

Disinfection of diving equipment

Repair and storage of diving equipment

Chapter III. FACILITIES AND EQUIPMENT FOR DIVING

Diving compressors

Control and measuring instruments

Means of underwater illumination

Diving telephone apparatus

Decompression (recompression) chambers

Diving devices

Maintenance, check, and storage of diving facilities

CHAPTER IV. DIVES AND SAFETY PRECAUTIONS

Organization of underwater descents

5/8

USSR

MAKSIMENKO, V. A., et al., DOSAAF Publishing House, 288 pp

Descent in a 3-bolt ventilated outfit
Descent in a VKS-57 air-oxygen outfit
Descent in a regenerative diving outfit with an IDA-57 apparatus
Descent in an outfit with an AVM-1M air-tank apparatus
Descent in a SHAP-40 apparatus
Descent under difficult conditions

Chapter V. DIVERS' DISEASES

Diseases that result from substantial drops in pressure
Divers' diseases caused by change in partial pressure of gases
Other diseases of divers

Chapter VI. FUNDAMENTALS OF RIVER HYDROLOGY AND HYDRAULIC WORKS

Fundamentals of river hydrology
Some types of hydraulic works in inland waters
Seaport hydraulic works

Hydraulic works of ship repair and shipbuilding enterprises

Chapter VII. DIVING ACTIVITIES

Instruments and technical means of carrying out diving activities
Ground-scouring and ground-pumping equipment
Ship raising pontoons

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- 100 -

USSR

MAKSIMENO, V. A., et al., DOSAAF Publishing House, 288 pp

- Means of controlling ship survivability
- Emergency and rescue diving activity
- Ship-raising diving activity
- Underwater diving engineering activity
- Safety measures in doing underwater engineering
- Other diving activities
- Work in raising dangerously explosive objects
- Underwater concreting
- Unusual diving activities

Chapter VIII. UNDERWATER PHOTOGRAPHY

- Underwater photographic equipment
- Demands made on objectives for underwater photography
- Underwater moving picture apparatus
- Deep-water photography
- Underwater photographic and moving picture apparatus for underwater surveying

Chapter IX. BASIC INFORMATION ON RIGGING

- Cables
- Marine knots, marks, loops, splices

7/8

USSR

MAKSHENKO, V. A., et al., DCSAAF Publishing House, 288 pp

Rigging tool

Rigging accessories and devices used in rigging

Chapter X. PRINCIPLES OF ORGANIZATION AND ECONOMICS OF DIVING

Planning underwater activities. Estimates, contracts.

APPENDIXES

BIBLIOGRAPHY

8/8

- 101 -

Acc. Nr: **AP0043668**

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 2, pp 420-429

**EXPERIMENTAL DETERMINATION OF THE PROBABILITY
FOR EXCITATION OF BROMINE VIBRATIONAL LEVELS
IN COLLISIONS WITH He, Ne, Ar, AND Xe ATOMS
IN SHOCK WAVES**

N. A. Generalov, V. A. Maksimov

The behavior of the transition probability between bromine vibrational levels $\Delta E / h\nu$ in mixtures containing He, Ne, Ar or Xe is investigated for adiabatic factor values $0.5 \leq \omega_{\tau,1} \leq 18$. It is shown that in mixtures containing Ne or Ar the quantity $\Delta E / h\nu$ goes through a maximum at $\omega_{\tau,1} \sim 1$; in mixtures with He or Xe the variation of is different and depends on $\omega_{\tau,1}$. It is noted that for $\omega_{\tau,1} > 1$ the experimental results can be satisfactorily described by the Landau — Teller theory. Theories developed for $\omega_{\tau,1} < 1$ do not agree with data obtained in this range of $\omega_{\tau,1}$ values.

REEL/FRAME
19770072

2/21

USSR

UDC 612.58+612.015.32

ALIMOVA, Ye. K., MAKSIMENKO, V. A., and SHEPELEV, A. P., Chair of Biochemistry, Medical Institute, Rostov-na-Donu

"Changes in Lipid Metabolism at Various Stages of Acute Experimental Hypothermia"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 5, 1973, pp 814-818

Abstract: In unanesthetized dogs whose body temperature is lowered at a rate of 2-2.5°C/hr by application of ice packs, the initial response (prior to fall in body temperature) consists of an increase in total lipids and nonesterified fatty acids (NEFA) in arterial blood; a rise in total cholesterol in the liver and a fall in the lungs and skeletal muscles; and a fall in lipid phosphorus in the liver and skeletal muscles. Reduction of body temperature by 8-10°C causes a further increase in NEFA in arterial blood and a partial return of total lipids to the control value. Total cholesterol becomes normal in the liver and lungs, while lipid phosphorus increases in the lungs and decreases in skeletal muscles. When body temperature is reduced by 18-20°C (agonal period), total cholesterol increases in the liver and lungs, NEFA concentration decreases (relative to the preceding level) in the liver and lungs and increases in skeletal muscles, while lipid phosphorus decreases everywhere. The intensified

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USSR

ALIMOVA, Ye. K., et al., Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 5, 1973, pp 814-818

oxidation of NEFA in skeletal muscles is interpreted as a compensatory process tending to increase heat production in the cooled body, while the altered lipid metabolism in the lungs probably reflects accelerated production of the alveolar surfactant which reduces water diffusion and heat loss due to evaporation.

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- 40 -

USSR

UDC 669.271

KOLOBOV, G. A., ~~MAKSIMENKO~~, V. M., ZHURAVLEV, A. I., VAZHENIN, S. F., and DOBRUNOV, Yu. V.

"Use of Titanium Equipment in Magnesium Production"

Moscow, Tsvetnyye Metally, No 6, Jun 70, pp 39-40

Abstract: An account is given of investigations conducted jointly by the Solikamsk Magnesium Plant and the Titanium Institute on the use of titanium alloys in equipment intended for magnesium production. The corrosion resistance of the VT1, VT14, and VT5-1 titanium alloys was investigated. The results of tests conducted at chlorine and electrolysis plants are presented in a table. The VT1 alloy was found to be more corrosion-resistant than the VT14 and VT5-1 alloys. A brief history of the use of equipment made of titanium alloys at the Solikamsk plant is given. An inventory of various equipment, such as valves, pumps, gas-pumps, calorizers, gas scrubbers, etc., is presented, and the planned installation of new titanium alloy equipment is described. It is stated that the use of such equipment in the plant has already resulted in savings of 60,000 rubles.

1/1

USSR

~~MAKSIMENKO, V. N., STESHENKO, A. I., Institute of Theoretical Physics, Academy of Sciences USSR~~

"On Saturation for Interaction With a Hard Core"

Moscow, Yadernaya Fizika, Vol. 13, No. 4, Apr 71, pp 707-711

Abstract: The possibility of ensuring stability with respect to collapse for certain pair exchange central potentials with a hard core is investigated for the light double-magic nuclei He^4 , O^{16} , and Ca^{40} . Two approaches were possible in studying specific potentials: collapse stops when the distance between particles is considerably greater than the radius of the core, and the gas approximation is applicable in this case; the average distance between particles is commensurable with the dimensions of the core, when the gas approximation is invalid but can detect the collapsing character of the interaction i.e., answer the question: does stability with respect to collapse ensure potential. The calculations were made by a variational method with oscillator functions, and the hard core was calculated in the gas approximation. A calculation with the Gammet-Taler potential [Phys. Rev., 107, 291, 1952] is graphed and shows the behavior of the energy of the ground state of He^4 , O^{16} .

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USSR

MAKSIMENKO, V. N., STESHENKO, A. I., Yadernaya fizika, Vol. 13, No. 4, Apr 71, pp 707-711

and Ca^{40} nuclei as functions of the variational parameter. The binding energies of these nuclei have a deep minimum for values of r_0 close to r_0^{cr} . It is concluded that in this case the gas approximation "does not work."

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- 84 -

USSR

UDC 539.14+539.143

FILIPPOV, G. F., and MAKSIMENKO, V. N., Institute of Theoretical Physics,
Academy of Sciences Ukrainian SSR, Kiev

"Second-Order Correction of Perturbation Theory to Variational Binding Energy
of H^3 and He^4 "

Kiev, Ukrainskiy Fizicheskii Zhurnal, Vol. 15, No 8, Aug 70, pp 1277-1283

Abstract: In order to reach a conclusion regarding the applicability of shell model oscillator wave functions as the trial functions for the variational calculation of nuclear binding energy, it is necessary to calculate the second-order correction of the perturbation theory due to the difference between the pair potential of the interaction between nucleons and the effective oscillator pair potential which generates oscillator wave functions. The article describes results of calculating the second-order correction to the binding energy of the lightest H^3 and He^4 nuclei. The results show that the value of the binding energy correction depends on the two-body interaction variant that is chosen. For He^4 it is a tenth of the energy value determined by the variational method if only central forces act between the nucleons, and over half in the case of tensor forces. There are similar calculations for a system of three nucleons.

1/1

Acc. Nr:

AP0046168

Abstracting Service: 5/70
INTERNAT. AEROSPACE ABST.

Ref. Code:

UR0198

A70-23289 # . Calculation of cylindrical shells with ribs of variable rigidity, loaded by longitudinal forces (Raschet tsilindricheskikh obolochek s rebrami peremennoi zhestkosti, nabruzhennykh prodol'nymi silami). V. P. Maksimenko (Akademija Nauk Ukrainskoj SSR, Institut Mekhaniki, Kiev, Ukrainian SSR). Prikladnaia Mekhanika, vol. 6, Jan. 1970, p. 43-50. In Russian.

Discussion of the stress-strain state of crosswise reinforced isotropic cylindrical shells loaded by longitudinal concentrated forces. All reinforcing ribs are of variable rigidity, but the longitudinal and circumferential ribs differ from each other. A solution to the problem is obtained on the basis of a system of two differential equations for the stress and radial displacement functions, which is solved with the aid of a finite-difference scheme.

V.P.

ALS

REEL/FRAME
19781245

USSR

UDC 669.15-196:621.787

STARODUBOV, K. F., KASILOV, A. N., and ~~MAKSIMENKO, V. Ya.~~, Dnepropetrovsk Metallurgical Institute

"Mechanical Properties of Some High-Strength Steels After Thermal and High-Temperature Thermomechanical Treatment"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 10, 1972, pp 132-136

Abstract: Comparative tests were made of the mechanical properties of steel brands 5KhNV (5KhNM), 5KhV2S, 60S2KhFA, 90KhS, ShKh15SC, 30S2KhFa type with cerium, 55KhGSNMF, and 70S2NDKM, oil hardened from optimum temperature and tempered in the 150-700°C temperature interval. The possibility is demonstrated of obtaining high-strength properties (endurance limit $> 260 \text{ kg/mm}^2$) for low-alloy steel by applying hardening with medium-temperature tempering and of increasing resistance to rupture of low-alloy steel (015-019%C) from 200 to 220 kg/mm^2 with adequate plasticity. High-temperature thermomechanical treatment is expedient for steel with 0.5-0.6% C and has little effect on steel with a carbon content $> 0.6\%$. At higher C-content, decreased embrittlement and static strength occur with low- and medium-temperature tempering. Specific thermomechanical processing conditions of 5KhV2S, 5KhNV (5KhNM), 1/2

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USSR

STARODUBOV, K. F., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 10, 1972, pp 132-136

55KhGSNMF, 50S2KhFA (with cerium), and 60S2KhFA steels and the obtainable hardening effects are indicated. Four figures, four bibliographic references.

2/2

USSR

UDC 539.26-548.735.4

ZASIMCHUK, Ye. E., and MAKSIMENKO, Ye. A.

"Polygonization Processes in Deformed Single Crystals of Refractory Metals and Their Alloys With Rhenium"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 148-153

Translation: Micro-x-ray study of polygonization is performed in single crystals of tungsten and molybdenum and their alloys with rhenium, rolled to 7% in the (100) plane. It is demonstrated that the influence of 27 wt.% rhenium on the course of polygonization in molybdenum can be reduced to a change in the type of polygonization structure, leading to recrystallization of the polygonized alloy under those conditions when the pure metal is not recrystallized and retains the initial orientation of the single crystal upon annealing. The reasons for this phenomenon are discussed. 2 Tables; 3 Figures; 10 Bibliographic References.

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- 57 -

USSR

UDC 669.276-172-179

ZASINCHUK, YE. E., and MAKSIENKO, YE. A., Institute of Metal Physics,
Academy of Sciences URSSR

"Kinetics of Subgrain Growth in the Polygonization of Deformed Tungsten"

Kiev, Metallofizika, No 31, 1970, pp 66-70

Translation: Plane-oriented tungsten single crystals (100) after deformation by directional rolling $[110]$ and polygonization annealing were studied by metallographic and x-ray micrographic methods with the use of a double-crystal spectrometer. Curves of distribution of subgrains according to sizes were plotted, from which it is evident that all subgrains become greatly enlarged as the time of isothermal annealing increases, while their number decreases. An assumption is made that subgrains grow as a result of their coupled fusion. An improved structure of subgrains during the annealing process as a result of the redistribution of chaotically distributed dislocations is noted.

Bibliography: 13 entries, 4 illustrations, 1 tables.

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- 70 -

USSR

UDC 662.61.001.57

KANTOROVICH, B. V., IVANOV, Yu. V., MAKSIMENKO, Yu. F.

"Modeling Pulsations of an Ideal Mixing Reactor"

V sb. Dinamika teplov. protsessov v energetike i tekhnol. (The Dynamics of Thermal Processes in Power Engineering and Technology -- Collection of Works), Kiev, "Nauk. dumka", 1971, pp 78-85 (from RZh-Teploenergetika, No 7, Jul 72, Abstract No 7T49)

Translation: The combustion process in the stoichiometric regime generates pulsations, the frequency of which is determined by the heat-air relationship. In the theory of vibration combustion particular attention is given to the properties of the acoustical system and only the role of a perturbing force and energy source is given to combustion itself. Pulsation mechanisms exist, however, associated only with the combustion processes themselves. Vibrational processes were modeled on the MN-7 computer. It was shown that pulsations of the relaxation type arise in an ideal mixing reactor. The dependence of the frequency of the relaxation vibrations on the heat flow and on oxygen was investigated. The studies verified that one can judge the shape of the pulsation spectrum on the basis of the heat-air relationship. 3 ill., 6 ref. R. M. Shchurin.

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- 71 -

USSR

UDC: 621.396.6-161.5

MAKSIMENKOV, A. V.

"Algorithm for Tracing LSI Connections of Parallel Type"

Vychisl. tekhnika. T. 1 (Computer Technology. Vol. 1--collection of works), Kaunas, 1970, pp 321-325 (From RZh-Radiotekhnika, No 7, Jul 70, Abstract No 77236)

Translation: The paper considers an algorithm of parallel type for making printed-circuit connections. Resumé.

1/1

USSR

UDC 621.372.061

MAKSIMENKOV, A. V., MIKHAYLOV, A. V.

"Finding Paths on a Graph by the Method of Successive Growth of Sides"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic Engineering. Scientific and Technical Collection of Microelectronics), 1970, vyp. 4 (25), pp 92-97 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A107)

Translation: One of the problems of finding shortest paths on a graph satisfying defined restrictions is investigated. The given method can be used to solve technological problems in machine design of integrated circuits.

1/1

USSR

UDC 621.376.223.029.64

MAKSIMENKOV, P.P., MIKHAYLOV, B.M.

"Magnetoelastic Amplitude Modulator Of Millimeter Waves Based On Antiferromagnetic (Hematite)"

Radiotekhnika i elektronika, Vol XVII, No 6, June 1972, pp 1256-1259

Abstract: An amplitude modulator of microwave radiation of the millimeter band is proposed and is accomplished by the use as a modulating substance of an antiferromagnetic with strong magnetoelastic interaction (hematite, α Fe₂O₃). The advantage of this material over well-known methods is shown for modulation of microwaves in the indicated range. An experimental device for study of modulation characteristics is described and the experimental results are discussed. The author thanks Ya. A. Menosov and V.I. Ozogin for consideration of the paper and for helpful council. 4 fig. 7 ref. Received by editors, 16 April 1971.

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USSR

UDC 621.396.6-181.48

MAKSIDENKOV, A. V. and MURZIN, YU. M.

"Discrimination of a Two-Dimensional Representation of a Connection Graph in the Design of Integrated Circuits"

Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn. (Collected Scientific Works on Problems of Microelectronics. Moscow Institute of Electronics Technology), 1972, vyp.10, pp 49-63 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V258)

Translation: The authors study the sequence-parallel method for laying out the connections of integrated circuits with the aid of a digital computer. The proposed method for laying out printed connections is based on the algorithm for constructing contraction circuits and on finding the optimal path between two subsets in a graph along with being based on the parallel algorithm for laying out connections. A series of effective procedures is proposed for improving the performance of the parallel layout algorithm. Using probability theory, it is shown that the proposed algorithm for discriminating a two-dimensional representation of a connection graph provides much better solution quality than any sequence-type algorithm. Recommendations are given on the use of the sequence-parallel algorithm for laying out printed connections. Resume.

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USSR

UDC 621.396.6-181.48

MAKSIMENKOV, A. V. and PETROV, G. N.

"Algorithm of Deformation Associated With the Disposition of Cells for Standard BIS (Large Integrated Circuits)"

Sb. nauch. tr. po probl. mikroelektron. tekhn. (Collected Scientific Works on Problems of Microelectronics Technology), 1972, vyp.10, pp 40-48 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V227)

Translation: A deformation algorithm is studied associated with the disposition of the cells of a standard, large integrated circuit on a real plate which takes into consideration its suitability chart. This is done with the aim of the machine design of standard, large integrated circuits with selective intercoupling. Resume.

1/1

USSR

UDC: 621.396.6-181.5

MAKSIMENKOV, A. V., MURZIN, Yu. M.

"Series-Parallel Methods of Tracing LSI Connections"

Sb. nauchn. tr. po probl. mikroelektron. Mosk. in-t elektron. tekhn.
(Collected Scientific Works on Problems of Microelectronics. Moscow
Institute of Electronic Technology), 1971, vyp. 6, pp 92-104 (from RZh-
Radiotekhnika, No 12, Dec 71, Abstract No 12V384)

Translation: Two algorithms are presented for laying out the connections in large-scale integrated circuits with a multilayered orthogonal system of metallization. The combined use of series and parallel methods enables use of the proposed algorithms for laying out LSI circuits with 500-1200 connections. The entire set of connections is broken down into a number of subsets, the configurations of each of these subsets being distributed into a minimum number of layers by means of the parallel algorithm. The proposed layout methods minimize the lengths of all connections.

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1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CONTROL OF DISRUPTION AND RESTORATION OF EXPERIMENTAL NERVE
CONNECTIONS OF THE SMALL INTESTINE AFTER ITS CENTRAL DENERVATION -U-
AUTHOR--(02)-MAKSIMENKOVA, A.N., KULIK, V.P.
COUNTRY OF INFO--USSR
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49,
NR 6, PP 117-119
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AUTOTRANSPLANTATION, SMALL INTESTINE, DOG, REFLEX, NERVOUS
SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0564 STEP NO--UR/0219/70/049/006/0117/0119
CIRC ACCESSION NO--AP0131187
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131187

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTS ON DOGS SUBJECTED TO DIFFERENT OPERATIONS (EXTERIORATION OF THE INNERVATED INTESTINAL LOOP, TOTAL AUTOTRANSPLANTATION OF THE SMALL INTESTINE AND SURGICAL REINNERVATION AFTER TRANSPLANTATION OR DECENTRALIZATION OF THE INTESTINE) IT IS SHOWN THAT RECTOGENITAL REFLEX AND THE DURATION OF THE INHIBITORY PHASE OF METHYLDIASYL ACTION ON THE MOTRICITY OF THE SMALL INTESTINE MAY SERVE AS TESTS FOR EVALUATING THE STATE OF CENTRAL INNERVATION OF THE SMALL INTESTINE. FACILITY: LABORATORY FOR TRANSPLANTATION OF ORGANS AND TISSUES OF THE ACADEMY OF MEDICAL SCIENCE OF THE USSR. FACILITY: INSTITUTE OF AGE PHYSIOLOGY AND PHYSICAL EDUCATION OF THE ACADEMY OF PEDAGOGICAL SCIENCES OF THE USSR, MOSCOW.

UNCLASSIFIED

MAKSIMENKOVA, T.

CENTRAL ASIAN WEATHER DELAYS SPRING PLANTING

Article by Engineer-Agriculturalist T. Maksimenkova. "The Weather and the Planting -- The USSR Hydrometeorological Center Reports"; Moscow, Sovetskaya Gazeta, Russian, 4 March 1972, p. 17

The unusually cold February weather and snowfalls in the Caucasus and Central Asia have retarded the revegetation of flora and interfered with the preparation of the soil for the sowing of spring crops. The fields and pastures were still covered with snow almost everywhere up to the end of February. In ordinary years grass growth and sprouting of buds and even the first pieces blooming of fruit trees had already begun by this time in the southern areas of Central Asia and the Caucasus. This year it has only begun to get warm in recent days. However, even at midday the air temperature has not exceeded 10° to 12°C, and there is still some frost at night.

In Turkmeniya and a large part of Uzbekistan the snow cover has melted, but the grasses have not yet begun to grow. In the rest of Central Asia the pastures are covered with snow. This year the pastures will evidently turn green again only during the second half of March, approximately two to three weeks later than the average over a period of many years. In connection with the large amount of precipitation which fell this winter, the soil is saturated to the water table, and this will promote the formation of a good crop of spring vegetation.

During the second half of February the weather was significantly warmer than usual in a large part of the European USSR, especially in the north. In the Baltic area and many regions of Belorussia, the Ukraine, and the Northern Caucasus the fields are already free of snow cover. It must be pointed out here that the snow cover disappears as a rule at the end of February in the Baltic republics, Belorussia, and the northern regions of the Ukraine and at the end of the first ten-day period of March in the central and western regions of the Ukraine (see map). True, a small snow cover formed again in Belorussia at the beginning of March.

Now the fields were free of snow, conditions were favorable for carrying out topdressing to winter crops because the weather was dry and

1/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--ABSORPTION SPECTRA AND STRUCTURE OF THIOACRIDONE -U-

AUTHOR--(02)-MAKSIMETS, V.P., POPILIN, O.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (2), 191-3

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--UV SPECTRUM, ORGANIC SULFUR COMPOUND, HETEROCYCLIC NITROGEN
COMPOUND, ACRIDINE, MOLECULAR STRUCTURE, THIOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0829

STEP NO--UR/0409/70/000/002/0191/0193

CIRC ACCESSION NO--AP0124496

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124496

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UV SPECTRA OF THIOACRIDONE (I), 10 METHYL THIOACRIDONE (II) AND 9 (METHYLTHIO) ACRIDINE IN HEPTANE, ETOH, DIOXANE AND WATER DIOXANE, AND THEIR IR SPECTRA IN SOLID FORM ARE GIVEN. IN NEUTRAL MEDIA, I EXISTS IN 2 TAUTOMERIC (THIONE THIOL) FORMS. IN ACIDIC MEDIA, I AND II FORM THE MERCAPTOACRIDINIUM IONS. IN SOLID STATE, I MOLES. ARE ASSOC'D. AND ARE IN THE THIONE FORM. FACILITY: KHARKOV, INST. GBSHCH. PITAN., KHARKOV, USSR.

UNCLASSIFIED

UDC 681.3.06:51

MAKSIKEY, I. V.

"Modeling of a Computer System"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming -- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 149-161. (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V618).

Translation: One version of organization of a computer system is studied, for which the time of input of one problem and output of its results is combined with the solution of another problem. A method is studied for performing modeling, a block diagram of a model of a supervisory program organizing the computer process in the system is described, the flow of jobs run on the computer is analyzed, and the results of modeling of one version of organization of computation are described.

USSR

UDC: 681.3

MAKSIMEY, I. Y., GLADYSHEVA, G. I.

"Organizing Measurement of the Operational Characteristics of Computers at the Computer Center of the Siberian Department of the Academy of Sciences of the USSR"

V sb. Mat. obespecheniye ETsVM. Vyp. 4 (Mathematical Provision of Digital Computers--collection of works, No 4), Kiev, 1970, pp 74-8) (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V682)

Translation: The authors describe the organization of systematic collection of operational characteristics of the computers at the Computer Center, the procedure for measuring these characteristics, the composition of program provisioning and the method of analyzing characteristics. The results of analysis of the operational characteristics of the M-20 computer gave a basis for drawing conclusions on the structure of this digital computer, on test effectiveness, and the effectiveness of auxiliary services and operation of external devices. A comparison of four computers is taken as an example to show that very little attention

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MAKSIMOV, I. V., GLADYSHEVA, G. I., Mat. obespecheniye ETsVM. Vyp. 4,
Kiev, 1970, pp 74-89

is usually given to the quality of preventative maintenance work; a strong correlation dependence is observed between digital computer structure, skill of servicing personnel and the quality of preventative maintenance. A. Doroshenko.

USSR

YEFIMOV, A. I., MAKSIMILIAN, S. V.

"One 4-index Transport Problem"

Mat. Metody v Ekon. [Mathematical Methods in Economics -- Collection of Works],
No 3, Kishinev, Shtiintsa Press, 1971, pp 3-34 (Translated from Referativnyy
Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V528).

NO ABSTRACT.

USSR

SYTIN, A. G., MAKSIMOV, A. A.

"Correlation of the Mobility of Rodents and Shrews with the Indexes of Solar and Geomagnetic Activity"

V. Sb. Solitse, elektrichestvo, zhizn' (Sun, Electricity, Life--collection of works), Moscow, Moscow University, 1972, pp 84-85 (from RZh-Astronomiya, No 3, Mar 73, Abstract No 3.51.538)

Translation: The highest mobility of these small wild beasts is observed on days when the level of solar and geomagnetic activity has a mean value with respect to the given season. During the days with large deviations of the solar and geomagnetic indexes the beasts avoid mass movements.

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MAKSIMOV, D. G.

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The investigations were made using 129 subjects; 67 of these were at an increased temperature and humidity for 4-72 hours, and 21, outfitted with special suits, for a period of two to eight hours performed different kinds of work in the pressure chamber with a rarefaction of the surrounding air corresponding to an altitude of 4-37 km (I. T. Avilichev, et al.; D. G. Maksimov, et al.). He registered the ECG and a number of other physiological indices using on-board and clinical instrumentation. In conducting investigations we compared the electrical instrumentation used in the "Vostok," "Voskhod," and "Soyuz" ships (N. A. Agadzhanyan, et al.; Zelyayn, Korzhichev, Polity, L. I. Kikurin, et al.; A. G. Zorin, et al.; Zelyayn, Korzhichev, and "Apollo" ships (Geddes and Baker; Weltman, et al.), and 19 modifications of electrodes created in the course of this study. In all subjects not less than two to five times a day we checked interelectrode resistance for a d-c current, and in most cases also determined the interelectrode

subject continued in closed ecological systems under the condition of a human during flight the methods which have won broadest recognition are electrocardiography, pneumography and monitoring of body temperature (O. G. Gerasimov, Yu. G. Safedov, et al.; Leitzya Komichenskiy Polity Cheloveka (First Named Space Flight); Weltman, et al.). Neurological difficulties arise most frequently when registering the ECG because prolonged contact of the electrodes with the body causes an irritation of the skin up to appearance of ulceration. Attempts to replace monitoring of cardiac activity by the registry of bioelectric activity by some other method (using electrogoniometer, mechanical or capacitance effects) for the time being have been unsuccessful (Filizator and Halvorsen; Weltman, et al.; E. M. Hayevskiy).

Article by D. G. Maksimov, V. P. Kiselev, L. A. Samarin and A. M. Kiselev, Researches in the Field of Human Physiology and Medicine, Vol. 5, September-October 1971, pp. 7-10, submitted for publication

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